

<div>NWS FORM E-5 (11-88) (PRES. by NWS Instruction 10-924)</div> <div>U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE</div>	<div>HYDROLOGIC SERVICE AREA (HSA) <b>WFO Jackson, Mississippi</b></div> <div>REPORT FOR: MONTH      YEAR <b>November    2011</b></div> <div>SIGNATURE <b>Alan E. Gerard, Meteorologist In-Charge</b></div> <div>DATE <b>12/16/2011</b></div>
<div>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</div> <div>TO:      Hydrometeorological Information Center, W/OH2          NOAA / National Weather Service          1325 East West Highway, Room 7230          Silver Spring, MD 20910-3283</div>	

*When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)*

☒

An X inside this box indicates that no river flooding occurred within this hydrologic service area.

Synopsis...

The month of November had a classic La Nina look to it. The mean monthly temperatures across the Hydrologic Service Area (HSA) were a little above normal. Rainfall was mostly below normal with the exception of a small area in Southwest and Central Mississippi. From Arkansas and up the Ohio Valley, rainfall ranged from 125 to 300 percent of normal. Beginning around the middle of the month, the above normal rainfall produced a significant below flood stage rise on the Lower Mississippi River.

High pressure was in control of the local weather through the 2<sup>nd</sup>. A cold front swept across the region on the 3<sup>rd</sup> bringing widespread rainfall. Rainfall amounts ranged from 0.25 to 0.50 inches across the HSA. High pressure dominated the weather scene through the 8<sup>th</sup>.

Another cold front rapidly moved through the HSA on the 9<sup>th</sup>. Rainfall amounts ranged from 0.25 to 1.50 inches west of I-55 while areas east received 0.25 inches or less. Pacific high pressure moved in behind the front. The high pressure moved across the Gulf South to the Southeast U.S. and off the Atlantic Coast by the 13<sup>th</sup>. This allowed for an increase in temperatures and moisture across the region through the 15<sup>th</sup>.

A frontal system dropped slowly to the south across the area on the 15<sup>th</sup>. During the predawn hours of the 16<sup>th</sup>, a squall line developed head of the front in South and Southeast Mississippi, producing two EF-1 tornadoes and 1 EF-2 tornado. The front swept across the area during the remainder of the day. Rainfall amounts ranged from 0.10 to 1.50 inches over northwest portions of the service area while 0.50 to 3.00 inches fell across southeast portions. High pressure of Pacific origin moved into the region on the 16<sup>th</sup> and 17<sup>th</sup>, bringing cool but not necessarily cold temperatures.

A warm up took place as high pressure shifted to the east on the 18<sup>th</sup> and 19<sup>th</sup>. Another cold front slowly moved across Arkansas on the 20<sup>th</sup> and 21<sup>st</sup>, bringing significant rainfall to Arkansas and portions of the Ohio Valley. This system produced moderate rises along the Lower Mississippi River. The front finally picked up speed as it moved across the HSA on the 22<sup>nd</sup>,

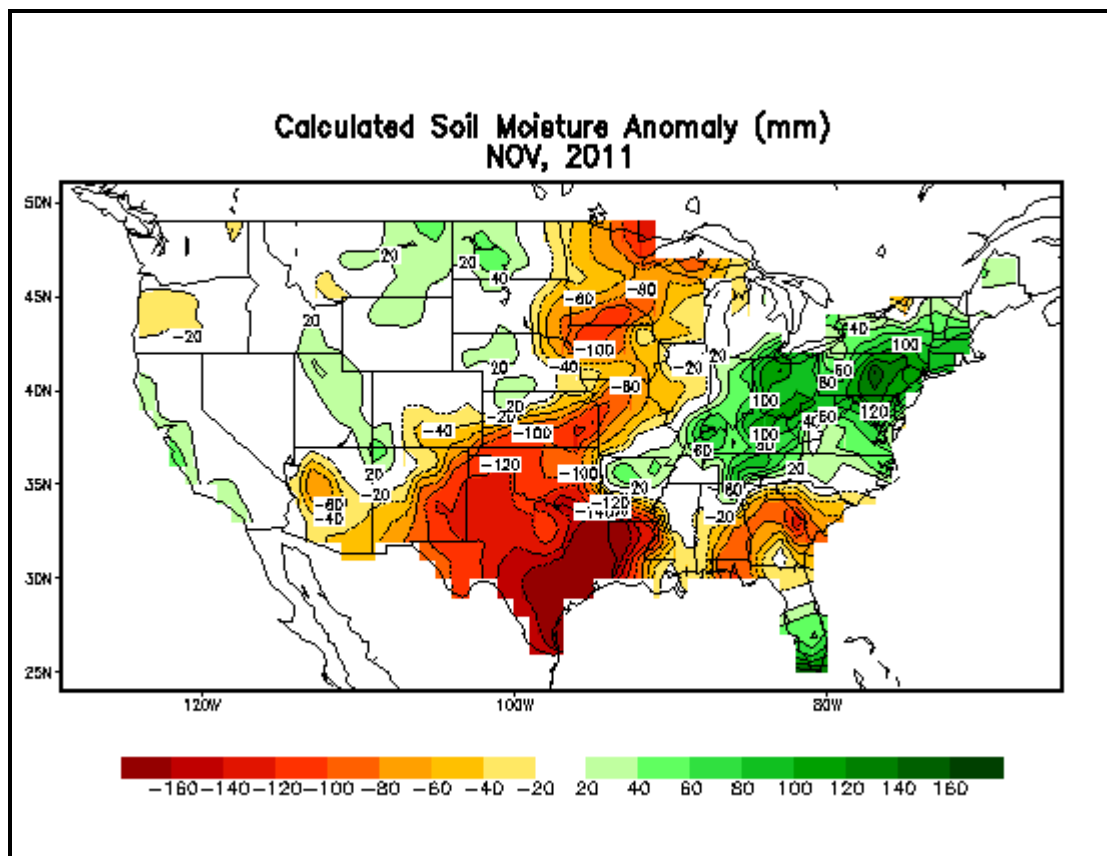
dropping from 0.25 to 2.00 inches of rainfall. Once again high pressure moved into the region through the 25<sup>th</sup>.

Another front moved across the region from the 26<sup>th</sup> into the 27<sup>th</sup>. Rainfall from 0.50 to 1.50 inches, with higher totals from 2.00 to 3.00 inches, occurred across the HSA. Light rainfall and drizzle occurred across central and southern portions of the HSA, while light drizzle and some snow flurries occurred as an upper level low pressure center moved across North Mississippi on the 28<sup>th</sup> into the early hours of the 29<sup>th</sup>. High pressure moved into region through the end of the month.

### River and Soil Conditions...

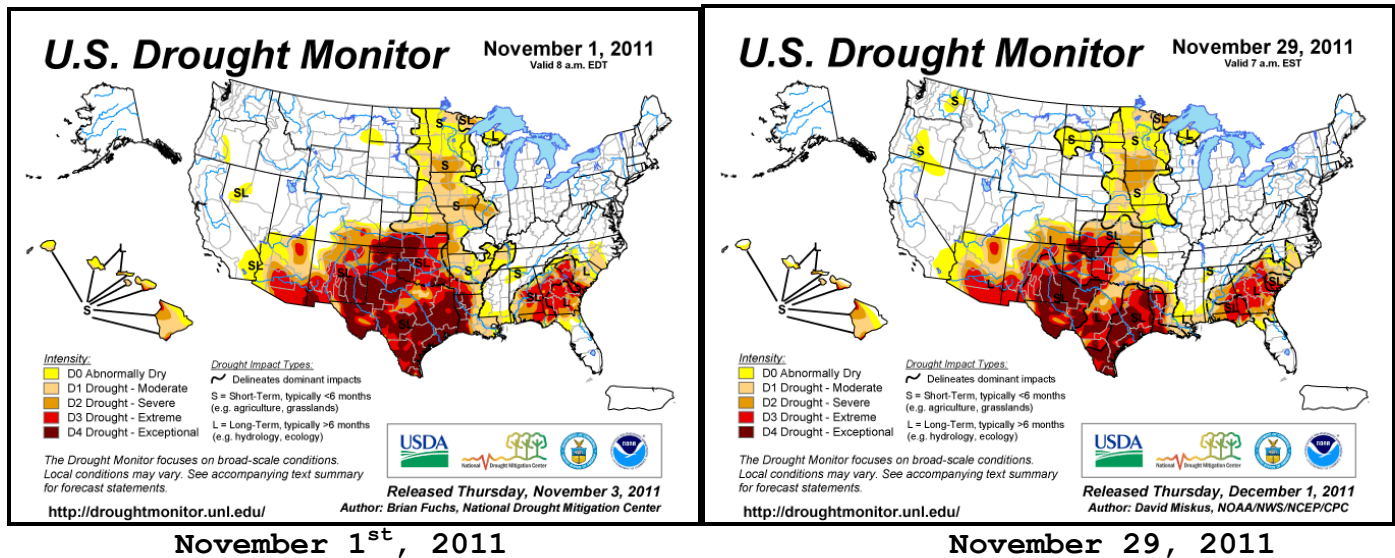
November rainfall was below normal except across portions of Southwest and Central Mississippi. Rainfall across this region ranged from near normal to 125 percent of normal rainfall. The driest region was in Southeast Mississippi where rainfall ranged from 25 to 50 percent of normal. The remainder of the HSA had rainfall totals range from 50 to 75 percent of normal with some locations approaching near normal.

The driest soils within the HSA continue to be across Northeast Louisiana, Southeast Arkansas, and extreme western Mississippi. The only areas where soil conditions were near normal was North Central and Northeast Mississippi.

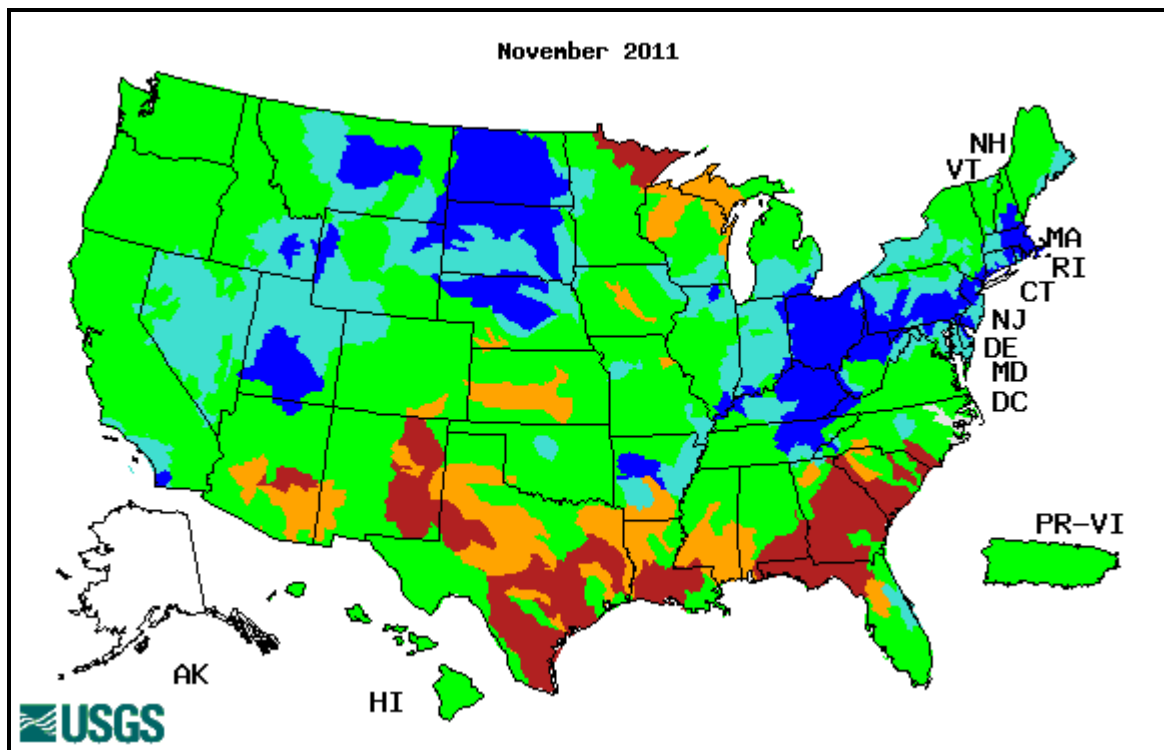


November 2011

A comparison of the November 1<sup>st</sup> U.S. Drought Monitor to the November 29<sup>th</sup> U.S. Drought Monitor showed improvement across Northeast Louisiana and Southeast Arkansas.



The United States Geological Survey's (USGS) November 2011 river streamflow records were compared with all historical November streamflow records. River streamflow was below normal across the Pearl, Pascagoula, and Homochitto River Systems. All other areas showed near normal streamflow.



Explanation - Percentile classes						
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	

Minor to moderate River rises occurred across portions of Northeast Louisiana, Southeast Arkansas, and the Yazoo Delta Region of Mississippi during the last week of the month. The Mississippi River experienced a significant river rise during the last two weeks of the month. Little changes occurred along other area rivers.

Soil moisture remains near normal in East Mississippi and below normal across much of the remainder of the area. Temperatures are expected to be above normal while rainfall is expected to remain below normal in the 1 to 3 month time period. With streamflow at or below normal, flood potentials are as follows:

<i>Pearl River System:</i>	Below Normal.
<i>Yazoo River System:</i>	Below Normal.
<i>Big Black River System:</i>	Below Normal.
<i>Homochitto River System:</i>	Below Normal.
<i>Pascagoula River System:</i>	Below Normal.
<i>Northeast LA and Southeast AR:</i>	Below Normal.
<i>Tombigbee River System:</i>	Below Normal.
<i>Mississippi River:</i>	Normal.

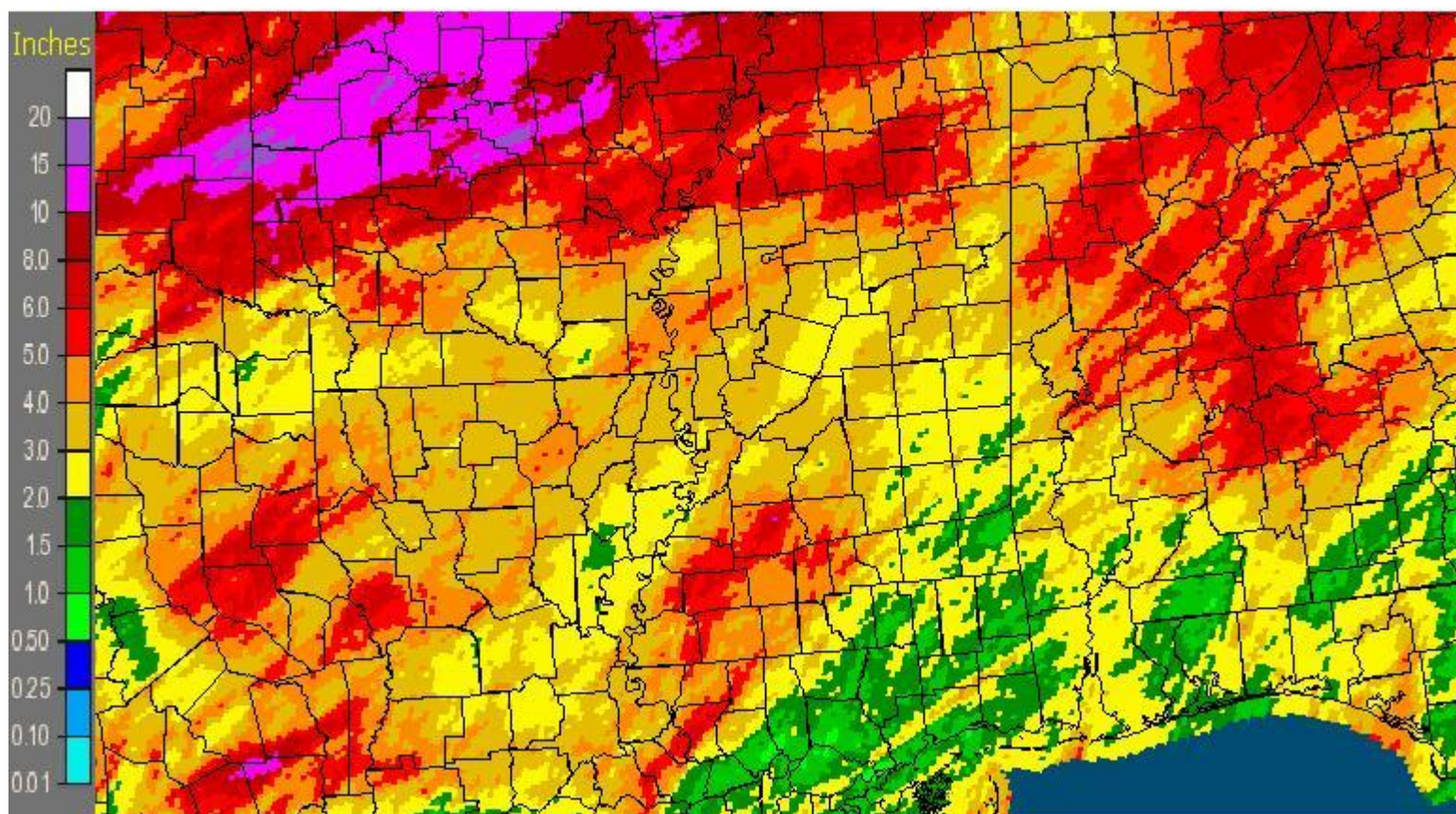
#### **Rainfall for the month of November**

The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on October 31<sup>st</sup> until 7 am on November 30<sup>th</sup> were: 6.70 inches at Hazlehurst, MS; 6.56 inches at Meadville 5SE, MS; 5.72 inches at Oak Ridge, LA; 5.66 inches at Union Church, MS; 5.40 inches at Rayville, LA; 5.35 inches at Yazoo City, MS; 5.23 inches at Moorhead, MS; 5.20 inches at Portland, MS; 5.02 inches at Prentiss, MS; 5.01 inches at Grenada, MS; and 4.92 inches at Monticello, MS;

The lowest monthly rainfall totals in the HSA were: 1.92 inches at Pat Harrison Waterway's Turkey Creek Water Park, MS; 2.09 inches at Shubuta, MS; 2.12 inches at Hattiesburg, MS; 2.17 inches at Laurel, MS; 2.37 inches at Crawford, MS; and 2.48 inches at Pat Harrison Waterway's Archusa Water Park, MS.



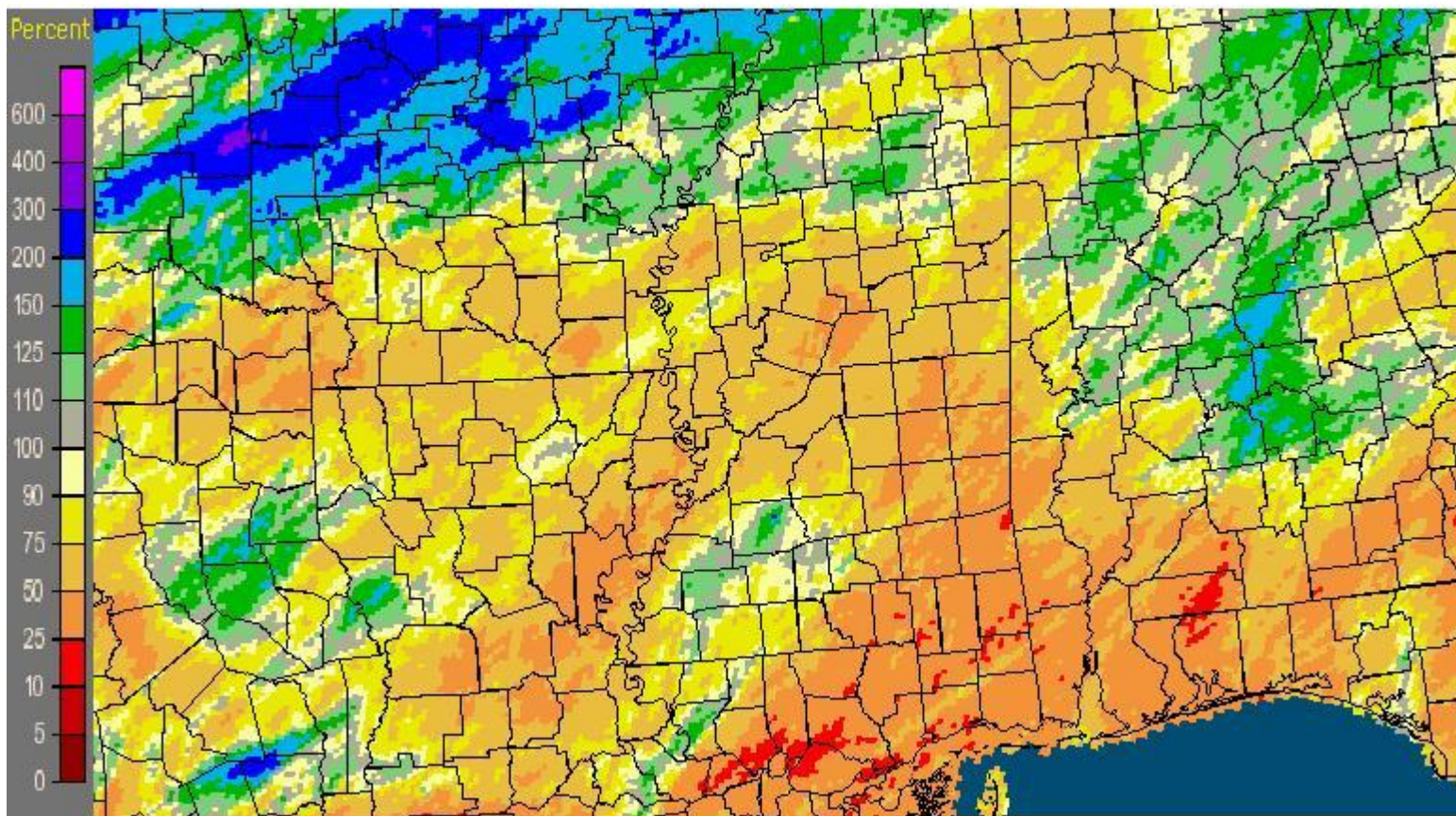
Mississippi: November, 2011 Monthly Observed Precipitation  
Valid at 12/1/2011 1200 UTC- Created 12/3/11 21:37 UTC



November 2011 Rainfall Estimates



Mississippi: November, 2011 Monthly Percent of Normal Precipitation  
Valid at 12/1/2011 1200 UTC- Created 12/3/11 21:41 UTC



November 2011 Percent of Normal Rainfall Estimates

Note: Observer rainfall and MPE may differ due to time differences.

November rainfall for Selected Cities...

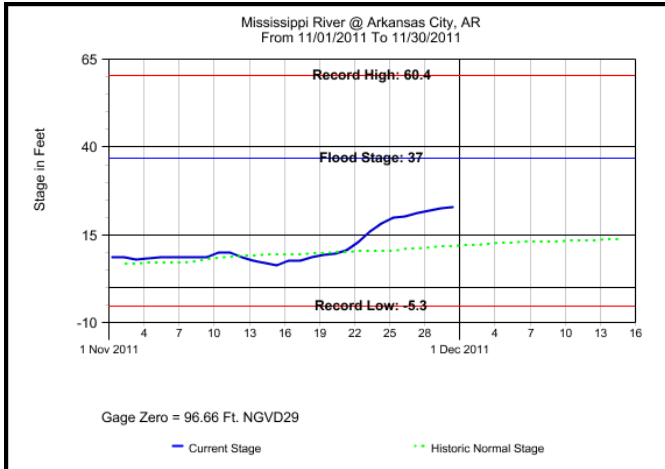
City (Airport)	November Rainfall	Departure from normal	2011 Rainfall	2011 Departure from Normal
Jackson, MS	3.50	-1.26	42.78	-6.21*
Meridian, MS	2.94	-2.01	46.46	-4.64*
Greenwood, MS	3.64	-0.88	31.79	-14.33*
Greenville, MS	3.80	-1.26	26.62	-20.40*
Hattiesburg, MS	3.41	-0.86	52.90	-4.47*
Vicksburg, MS	3.44	-1.56	31.44	-17.73*

\* 2011 Departures from Normal are now using the new Climate Means 1981-2010 values. Prior monthly reports used the 1971-2000 Climate Means.

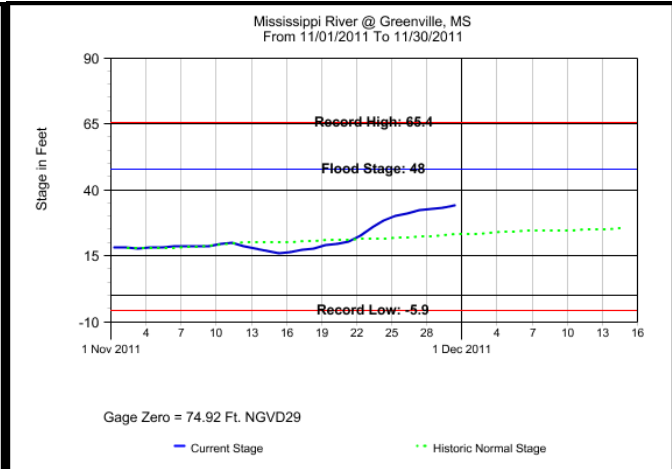
# Mississippi River...

## Mississippi River Plots for November, 2011

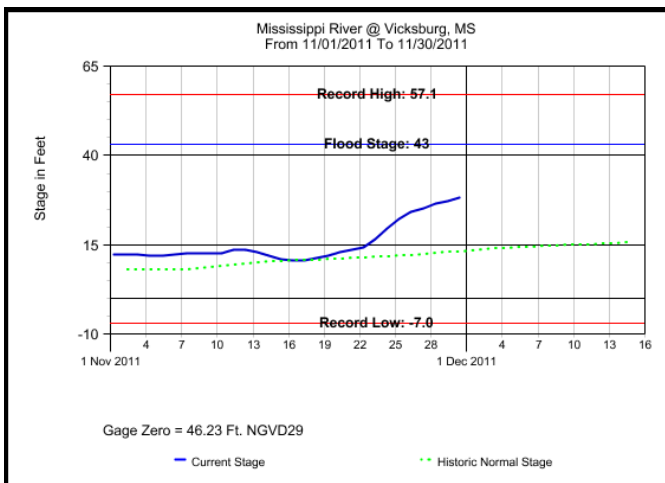
Plots Courtesy of the United States Army Corps of Engineers



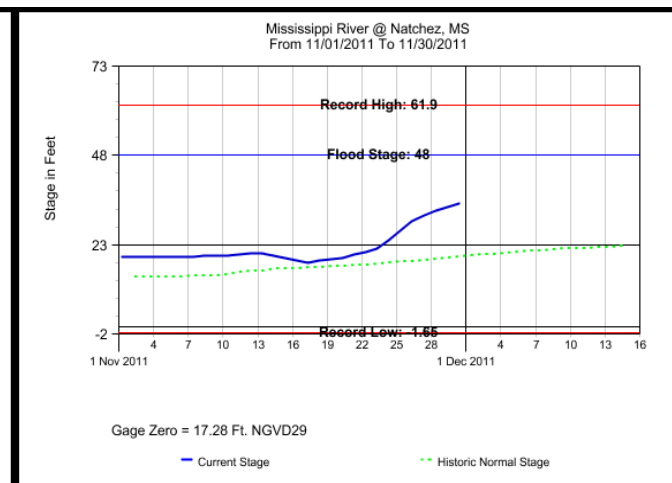
ARKANSAS CITY, MS



GREENVILLE, MS



VICKSBURG, MS



NATCHEZ, MS

Preliminary high and low stages for the month:

Location	FS	High Stage(ft)	Date	Low Stage(ft)	Date
Arkansas City, AR	37	23.19	11/30/11	6.33	11/15/11
Greenville, MS	48	34.21	11/30/11	15.98	11/15/11
Vicksburg, MS	43	28.48	11/30/11	10.29	11/16/11
Natchez, MS	48	35.02	11/30/11	17.83	11/18/11

Total Flood Warning products issued: 0

Total Flood Statement products issued: 0

Total Flood Advisories MS River : 0

Daily Rainfall Products (RRA'S) issued: 30

Daily River Forecast Products (RVS'S) issued: 30

Daily River Stage products (RVA'S) issued: 30

Marty V. Pope

Service Hydrologist &

Latrice Maxie

Assistant Hydrologist/Observing Program Leader (OPL)

Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District  
USGS Ruston District  
USACE Mobile District  
USACE Vicksburg District  
USACE Mississippi Valley Division  
USGS Mississippi District  
SRH Climate, Weather and Water Division  
Lower Mississippi River Forecast Center  
Pearl River Valley Water Supply District  
Hydrologic Information Center  
Southern Region Climate Center  
Pat Harrison Waterway District  
Pearl River Basin Development District